UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,504	06/23/2003	Billy Joe Ratliff JR.	DN2003095	9702

27280 7590 03/02/2005

THE GOODYEAR TIRE & RUBBER COMPANY
INTELLECTUAL PROPERTY DEPARTMENT 823
1144 EAST MARKET STREET
AKRON, OH 44316-0001

EXAMINER	
MAKI, STEVEN D	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,504	RATLIFF ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11, 13, 14* is/are rejected.

7)☒ Claim(s) *12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *101804,062303*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 32. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, it is unclear how many ribs are being claimed. In claim 2 line 4, it is suggested to change "the ribs" to --the rib--.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5) **Claims 1-4, 6-8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 971 (EP 1075971) in view of Japan '919 (JP 2002-103919) and at least one of Japan 403 (JP 3-186403) and Fontaine (US 5343918).**

Europe 971, directed to improving water drainage, discloses a pneumatic tire having a central rib 8, slant grooves 7a, 7b, blocks and sipes 30, 33. See figure 11 tread embodiment. Since the blocks in figure 11 are not divided by circumferential grooves and are thereby continuous from the central region to the shoulders, Europe 971's blocks extend from the central region to the shoulders as claimed. Europe 971 does not recite using sipes in the rib.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide Europe 971's rib with sipes such that the sipe density is 2-8 sipes / inch (0.78-3.15 sipes/cm) since Japan 919, also directed to improving drainage of a tire tread having a central rib and slant grooves, suggests forming sipes at a pitch (spacing) of for example 5.8 mm, in the central rib, which like that of Europe '971 has "rib chamfers" (pseudo land parts / false land parts 26) so that the tire tread has excellent braking effect on ice / snow in addition to having improved drainage. Furthermore, it would have been obvious to increase the sipe spacing toward the tread shoulders such that the sipe density in the central region is greater than the sipe density in the side regions in view of the suggestion from at least one Japan 403 and Fontaine suggestion to use a larger number and more closely spaced sipes in a central region than a side region of the tread; Japan 403 teaching improving performance on ice and snow without

deteriorating dry road performance and Fontaine teaching obtaining more uniform handling and excellent grip. Hence, Japan 919 motivates one of ordinary skill in the art to add sufficient number of sipes to the tread of Europe '971 to improve its winter performance (i.e. braking on ice / snow) and thereby make Europe 971's tire an "all-season tire". One of ordinary skill in the art would have found Japan 919's teachings applicable to Europe 971 since Europe 971 and Japan 919 are directed to the same problem of improved drainage and use the same solution - a "pseudo land part" (rib chamfer). With respect to the spacing of sipes used for improving driving / braking on ice / snow, at least one of Japan 403 and Fontaine suggest using more sipes in the central region of the tire than the side regions.

As to claims 2-4, the claimed "laterally extending edges" read on the trailing short edge of the pseudo land portion (the edge between section view II-II and section view III-III). The description of "laterally extending edges" fails to require tread structure (e.g. the laterally extending edge being ground contacting) different from that disclosed by Europe 971. As to offset, note the pseudo land portions 11 on one side of the rib are offset from those on the other side. The claimed "rib chamfer" reads on pseudo land portion 11. *The pseudo land portion 11 is part of the rib 8* as best seen in figures 8, 9a and 9b.

As to claim 6, Japan 919 suggests using v-shaped sipes.

As to claim 7, the claimed sipe orientation the blocks would have been obvious in view of Europe 971 and Japan 919's teaching to incline the sipes in the blocks in a direction opposite to that of slant grooves.

As to claim 8, Japan 919 suggests the claimed inclination. See figure 2.

As to claim 11, Japan 919 suggests extending sipes into the shoulders. See figures.

As to claim 13, the claimed sipe density would have been obvious in view of the sipe density for a central region of a tread suggested by Japan 919 and at least one of Japan 403 and Fontaine.

6) **Claims 2-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 971 in view of Japan '919 and at least one of Japan 403 and Fontaine as applied above and further in view of Himuro 892 (US 2002/0062892), Japan '513 (JP 2002-240513) or Ratliff (US 2004/0069389).**

As to claims 2-5, it would have been obvious to one of ordinary skill in the art to form Europe 971's tire tread having enhanced water drainage such that ground contacting edges of the rib comprise "laterally extending edges" and drainage improving "rib chamfers" (pseudo land portions) extending from those edges as claimed since (1) Himuro '892, also directed to improving water drainage for a tread having a central rib and slant grooves, suggests forming the rib such that in addition to having "rib chamfers" (pseudo land portions 14a) for improving drainage, the rib has non-linear ground contacting edges comprising "laterally oriented edges"; one of ordinary skill in the art readily understanding that such edges improve traction or (2) Japan '513, also directed to improving water drainage for a tread having a central rib and slant grooves, suggests forming "rib chamfers" for improving drainage in the rib such that as can be seen from figure 1, the rib has nonlinear ground contacting edges comprising "laterally

oriented edges" or (3) Ratliff suggests forming chamfers for improved wet and snow traction along a tread element such as a rib (paragraph 32), such that "laterally extending edges" are defined. As to claims 3 and 4, the chamfer width and height of Europe 971's "rib chamfer" (pseudo land part) decreases toward the tip thereof. The limitation of the sipes extending into the chamfers would have been obvious in view of (a) Europe 971's teaching to form the pseudo land part on the side surface of the rib and (b) Japan '319's teaching to use sipes in the rib such that the sipes open to the side surfaces of the rib.

7) **Claims 9, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 971 in view of Japan '919 and at least one of Japan 403 and Fontaine as applied above and further in view of Europe 685 (EP 688685).**

As to claims 9-10, it would have been obvious to provide Europe 971's slant grooves with the claimed maximum width in the central 15% of each side region since, Europe 685, directed to improvement of wet performance of a tire having a central rib and slant grooves, suggests sizing such grooves such that the slant groove is wider in the middle region.

As to claim 14, it would have been obvious to provide Europe 971's tread such that the NTG decreases from the tread edge toward the tread center (or in other words, the negative ratio increases from the tread edge toward the tread center), since Europe 685 suggests increasing negative ratio from the side end of the tread toward the central region so as to obtain improvement of drainage property and ensuring rigidity for steering stability. As to maximum NTG at the EP, note the rib at the EP.

Allowable Subject Matter

8) **Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

The prior art of record fails to suggest further modifying Europe 971 so as to have the claimed arrangement of sipes each having a wide and narrow width portion.

Remarks

9) The remaining references are of interest.

10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
February 21, 2005

STEVEN D. MAKI 2-21-05
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733